WHAT IS CLAIMED IS:

1. A method for producing alloy flakes for a rare earth sintered magnet of a structure containing an R-rich region and dendrites of an $R_2Fe_{14}B$ phase with a dendrite content of not less than 80 vol%, said method comprising the steps of:

(A) preparing an alloy melt of a composition consisting of R of at least one element selected from the group consisting of rare earth metal elements including yttrium, boron, and the balance M including iron, and

(B) supplying and solidifying said alloy melt prepared in step (A) on a cooling roll, wherein said cooling roll has on its roll surface a plurality of linear nucleation inhibiting portions for inhibiting formation of dendrites of a $R_2Fe_{14}B$ phase and chill, and a plurality of nucleating portions for formation of said dendrites, and wherein said nucleation inhibiting portions have a region with a width of more than 100 μm.

2. The method according to claim 1, wherein said nucleating portions are of a linear configuration and have a width of not more than 30 μm.

3. The method according to claim 1, wherein said linear nucleation inhibiting portions have mutual intersections, and said nucleating portions are in the form of dots formed between said intersections over the entire surface of said

roll, and each of said dots has a minimum transverse size of not more than 50 μm.

4. The method according to claim 1, wherein said nucleating portions are made of copper, iron, molybdenum, tungsten, or nickel metal, or an alloy of any of these.

5. The method according to claim 1, wherein said nucleation inhibiting portions are made of a material having a thermal conductance of not less than 20 W/mK lower than that of the nucleating portions.

6. The method according to claim 1, wherein said nucleating portions are in the form of linear or dotted convexes, and said nucleation inhibiting portions are in the form of linear concaves formed between said convex nucleating portions, and wherein a depth of said concaves is deeper than 50 μm as measured from the top of said convexes.

7. The method according to claim 6, wherein, in step (B), said alloy melt is solidified by bringing the alloy melt in contact with said convexes but keeping the alloy melt out of contact with at least the bottom of said concaves.

8. The method according to claim 7, wherein in step (B), said alloy melt is solidified in an inert gas atmosphere so that the thickness of the resulting alloy flakes is 0.05

to 2 mm.

9. Alloy flakes for a rare earth sintered magnet obtained by the method of claim 1, comprising R of at least one element selected from the group consisting of rare earth metal elements including yttrium, boron, and the balance M including iron, and having an alloy structure containing an R-rich region and dendrites of a $R_2Fe_{14}B$ phase, with a dendrite content of not lower than 80 vol% and a chill content of not higher than 1 vol%, wherein an average size of crystal grains including said R-rich region and said dendrites of the $R_2Fe_{14}B$ phase in the alloy structure is not smaller than 40 μm.

10. The alloy flakes for a rare earth sintered magnet according to claim 9, wherein the average interval between said R-rich regions is 1 to 20 μm.

11. The alloy flakes for a rare earth sintered magnet according to claim 9, wherein the average interval r between said R-rich regions is 1 to 10 μm, and wherein an average size of crystal grains including said R-rich region and said dendrites of the $R_2Fe_{14}B$ phase in the alloy structure is larger than $(6r + 2.74x - 65)$ μm, wherein r stands for an average interval between the R-rich regions, and x stands for an R content in mass%.

12. The alloy flakes for a rare earth sintered magnet according to claim 9, wherein a content of α-Fe phase in the alloy structure is not more than 5 vol%.

13. A rare earth sintered magnet obtained by pulverizing, compacting, sintering, and ageing raw material alloy flakes containing the alloy flakes for a rare earth sintered magnet of claim 9.